Into the cloud

Vital for the battlefield
This article was first published in the
Canadian Defence Review Magazine in October 2020

Why migrate to cloud?

Whether it's used by the military or private-sector companies, cloud is a key component of all digital modernization programs. But, it is especially vital on the battlefield and for armed forces deployment during civilian emergencies and natural disasters. The growing ubiquity of sensors to aid decision-makers and boots on the ground means that massive volumes of data will need to be synchronized by tools such as artificial intelligence (AI) and cloud computing. In this article, we explore the transformative impact of cloud.

Cloud computing offers a way to access servers, storage, databases, and application services over the Internet, with various solutions including the Infrastructure-as-a-Service, Platform-as-a-Service or Software-as-a-Service models. Practically every function can be migrated to cloud, from finance, procurement, or supply chain to human resources, information technology and enterprise performance management.

While cloud is a platform for the convergence of technologies, it is ultimately a vehicle for value creation, collaboration, and competitive advantage. The daunting task is figuring out how to digitally rearchitect the business leveraging the cloud, while continuing to deliver day-to-day business services.

In the military, cloud is the foundation upon which to build and scale more effective cybersecurity, advanced analytical capabilities, better command and control, and future enabling technologies. The key benefits include the speed and flexibility to gather, process, organize, share, and analyze large amounts of data in real time in order to respond swiftly in any situation.

Allowing the warfighter to access information

In the U.S., the Department of Defense (DoD) has been working closely with help from industry to modernize and migrate its enterprise IT systems and applications to the cloud, and recently reaffirmed the award of its Joint Enterprise Defense Infrastructure (JEDI) cloud computing contract.

The aim is to have an enterprise cloud, allowing the war fighter access to information more quickly, consolidating the data, and developing AI capabilities. JEDI will also include cloud capabilities that can operate out of standalone portable hardware even in the absence of communications links.

In the U.K., the Ministry of Defence has also recently engaged with industry to provide private cloud services to help them achieve their key objectives of data sovereignty and reliability.

In Canada, the Department of National Defence (DND) is also implementing cloud computing capabilities and has established the Joint Defence Cloud Program to guide and oversee the journey. Subject to its national security requirements, DND is coordinating with other cloud initiatives underway within the government to achieve consistency and economies of scale.

Civilian applications

Amid the current challenging business environment, private-sector companies are increasingly moving to digitize their operations end-to-end to better respond to changing customer behaviours and supply chain interruptions. Ninety-two per cent of CEOs in Canada say the COVID-19 pandemic has accelerated the digitization of their operations sharply, with one in five finding that a lack of IT skills and capability within their organization is hindering their progress, according to KPMG's recent special edition of the 2020 Global CEO Outlook report.

Many tech executives around the world now call cloud migration "an absolute necessity" after the unexpected massive shift to remote work during the pandemic lockdown put pressure on IT infrastructures. Instead of piecemeal migrations of small datasets, they are intent on moving an entire function's data to the cloud at scale.

While many organizations will deploy private clouds to expand their capacity and improve security, our research shows that hybrid or multi-cloud models, that is, the use of both private and public cloud services, will become the predominant app, data, and computing infrastructure over the next five years. This blended cloud approach helps them to reduce the risk of service disruption, extend their corporate network and functional workloads, while taking advantage of the best available services and features. Overall, the intent is to improve flexibility and interoperability.

One of the most-important advantages for deploying cloud is what's called 'containerization' in which software code is packaged or encapsulated into a container that is separate and portable from the host operating system and can run uniformly and consistently across any platform or cloud, free of potential issues.

Still, a complex cloud ecosystem raises the possibility of doing it wrong and making environments less secure.

To succeed with cloud adoption and scale, it's critical to educate the organization about all of the tangential functions that need to change alongside the technology, such as vendor management, upskilling personnel, security, finance, monitoring, and reporting.

Contact us

Grant McDonald
Industry Sector Leader,
Aerospace & Defence
T: 613 212-3613
E: gmcdonald@kpmg.ca

Grant McDonald is the Global Aerospace and Defence Industry Sector Leader at KPMG in Canada. For more information, visit www.KPMG.ca.

kpmg.ca   **#LetsDoThis**